ABSTRACT OF THE DISCLOSURE

An architecture and method useful for fast one-to-many image matching and image indexing. A plurality of images in a database are digitized into a plurality of descriptors. The descriptors are separated into a plurality of index groups. Index values for the images in the database are then calculated for the various index groups. An index value, for example, could be calculated as the average of the descriptors in a particular group. A source groups of images having particular index values over a particular threshold value are identified. When matching a target image to images in the database, the index values are calculated for the target image and compared to the threshold value. Source groups of images having similar index values over the threshold are then identified for further matching to the target image.